

2022-2023

**PROJECTS MANAGERMENTS CONSULTANCY
REPORT**

Client: Executive Engineer, Byatarayanpura Division, BBMP,
Bangalore.

Agency: Sri. U Ramesh , Contractor, Bangalore.

Name of Work : Improvements to roads and drains in 1st
Main Road 1st Cross Ravishanakara Residency,
Sanjeeviningara in Ward No-07 Byatarayanpura.

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Name of Work : Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.

Name of Client : Executive Engineer,
Byatarayanpura.Division, BBMP,
Bangalore.

Contractor/Agency : Sri. U Ramesh , Contractor,
Bangalore.

Total Bill Cost : Rs.8.96 Lakhs

Date of Inspection : 12.06.2023

Status of Bill : 1st & Final Bill

In the Presence of : Assistant Engineer (Ward No.07),
BBMP, Bangalore.

(b) Mr. Prajwal, Engineer

M/s. Civil Aim Consultants and
Engineers, Bangalore.

PMC Report

Item No.	Description of the Item	Unit	Qty	Comments / observations
1	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and	Cum	402.27	Work done up to the billed quantity and Quality is satisfactory
2	KSRRB M2100-10. Providing and laying Plain cement concrete of mix 1:3:6 with OPC @ 220kgs, with crushed 40mm and down size	Cum	14.62	Work done up to the billed quantity and Quality is satisfactory
3	Providing granite slabs of selected quality roughly dressed and fixed in cement mortar (1:6) including	Sqm	233.94	Work done up to the billed quantity and Quality is satisfactory

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Assistant Executive Engineer
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4	KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix	Cum	123.49	Work done up to the billed quantity and Quality is satisfactory
5	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of	Sqm	617.47	Work done up to the billed quantity and Quality is satisfactory
6	KSRRB M500-19. Providing and laying bituminous concrete using crushed aggregates of	Cum	24.70	Work done up to the billed quantity and Quality is satisfactory
7	KSRRB M800-13. Road Marking with Hot Applied Thermoplastic	Sqm	12.56	Work done up to the billed quantity and Quality is satisfactory

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Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Authorised Signatory

2022 - 2023

QUALITY CONTROL TEST REPORTS

Client: Assistant Executive Engineer, Kodigehalli Sub Division,
BBMP, Bangalore.

Agency: Sri. U Ramesh , Contractor, Bangalore..

Name of Work : Improvements to roads and drains in 1st
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QC ABSTRACT

Name of Work:: Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.

SI. No.	Item	Quantity As Per BOQ	Required No's of testes as per frequency	Actual No's of testes as per frequency	Testes Results
1	1:3:6	14.62 Cum	1	1	Pass
2	WMM	123.49 Cum	-	-	-
		Atterberg Limit	2	2	Pass
		AIV	1	1	Pass
		Shape Test	1	1	Pass
		Gradation	2	2	Pass
3	BC	24.70 Cum	-	-	-
		Quality of Binder	1	1	Pass
		AIV	1	1	Pass
		Shape Test	1	1	Pass
		Gradation	1	1	Pass
		Specific Gravity	1	1	Pass
		Stability of Mix	1	1	Pass
		Bitumen content	1	1	Pass

Cubes
0-5 Cum 1Set
6-15 Cum 2Set
16-30 Cum 3Set
31-50 Cum 4Set
Add 1set for extra 50Cum

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date: 04.05.2023

TEST REPORT

CLIENT	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
AGENCY	:	Sri. U Ramesh , Contractor, Bangalore.
NAME OF THE WORK	:	Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
SAMPLE ID	:	Cement (Zuari OPC 53 Grade)
DATE OF MANUFACTURE	:	April - 2023
DATE OF TESTING	:	02.05.2023 to 04.05.2023
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 269-2015
1	a) Initial Setting Time	IS-4031 (Part -5)	140 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	330 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	2 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	29.50 %	-

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date : 04.05.2023

TEST REPORT ON FINE AGGREGATES (SAND)

Client : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency : Sri. U Ramesh , Contractor, Bangalore.
Name of Work : Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
Date of Testing : 04.05.2023
IS Code : IS 383:2016
: IS 2386 (Part 1):1963(RA 2011)
Material : Sand **Total Wt. of Aggregates in gms** **1000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	86	8.60	8.60	91.4	90-100
2.36	144	14.40	23.00	77.0	75-100
1.18	191	19.10	42.10	57.9	55-90
600 Micron	160	16.00	58.10	41.9	35-59
300 Micron	213	21.30	79.40	20.6	8-30
150 Micron	137	13.70	93.10	6.9	0-10

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Date : 04.05.2023

TEST REPORT ON FINE AGGREGATES (SAND) IS 2116-1980

Client : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency : Sri. U Ramesh , Contractor, Bangalore.
Name of Work : Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
Date of Testing : 04.05.2023
Material : Sand - Masonry

Total wt. of aggregates in gms = 1000

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits as per IS 2116-1980
4.75	0	0.00	0.00	100.0	100
2.36	15	1.50	1.50	98.5	90-100
1.18	40	4.00	5.50	94.5	70-100
600 Micron	85	8.50	14.00	86.0	40-100
300 Micron	251	25.10	39.10	60.9	5-70
150 Micron	485	48.50	87.60	12.4	0-15

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Date : 04.05.2023

TEST REPORT ON COARSE AGGREGATES

Client : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency : Sri. U Ramesh , Contractor, Bangalore.
Name of Work : Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
Date of Testing : 04.05.2023
IS Code : IS 383:2016
: IS 2386 (Part 1):1963(RA 2011)
Material : 20mm Aggregates

Total Wt. of Aggregates in gms= 5000

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
40	0	0	0	100	100
20	184	3.7	3.7	96.3	95-100
10	2433	48.7	52.3	47.7	25-55
4.75	1975	39.5	91.8	8.2	0-10

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date : 04.05.2023

TEST REPORT ON COARSE AGGREGATES

Client : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency : Sri. U Ramesh , Contractor, Bangalore.
Name of Work : Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
Date of Testing : 04.05.2023
IS Code : IS 383:2016
: IS 2386 (Part 1):1963(RA 2011)
Material : 40mm Aggregates

Total Wt. of Aggregates in gms **15000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	191	1.27	1.27	98.73	95-100
20	8235	54.90	56.17	43.83	30-70
10	3275	21.83	78.01	21.99	10-35
4.75	2816	18.77	96.78	3.22	0-5

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date : 19.05.2023

ATTERBERG LIMITS TEST FOR WMM

Client : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency : Sri. U Ramesh , Contractor, Bangalore.
Name of Work : Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
IS Code: : IS 2720(Part 5):1985
Date of Testing : 17.05.2023 to 19.05.2023
Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition CI.406.2.1.2
1	Liquid Limit	22.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date : 19.05.2023

ATTERBERG LIMITS TEST FOR WMM

Client : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency : Sri. U Ramesh , Contractor, Bangalore.
Name of Work : Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
IS Code: : IS 2720(Part 5):1985
Date of Testing : 17.05.2023 to 19.05.2023
Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	21.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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Date: 19.05.2023

Aggregate Impact Value

Client	: Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: Sri. U Ramesh, Contractor, Bangalore.
Name of the Work	: Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
IS Code	IS 2386 (Part 4):1963(RA 2011)
Type of Mix	Wet Mix macadam
Date of Testing	19.05.2023

Sl No.	Details	Test No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	386	22.18
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	85	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	300	300	
4	Aggregate Impact value = percent fines $100 * (W_2/W_1)\%$	22.08	22.28	

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%(As per MORTH Specication table 400.12)

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date : 29.05.2023

Aggregate Gradation Test IS : 2386 Part I

Client	: Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: Sri. U Ramesh , Contractor, Bangalore.
Name of the Work	: Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
BIS Code	IS 2386(Part 1):1963
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	29.05.2023

Total Weight of Sample: 5000 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Requirement as per MORTH table 500.17	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	452	9.04	9.04	90.96	90 - 100	
9.5	491	9.82	18.86	81.14	70 - 88	
4.75	639	12.78	31.64	68.36	53 - 71	
2.36	685	13.70	45.34	54.66	42 - 58	
1.18	525	10.50	55.84	44.16	34 - 48	
0.600	556	11.12	66.96	33.04	26 - 38	
0.300	493	9.86	76.82	23.18	18 - 28	
0.150	365	7.30	84.12	15.88	12 - 20	
0.075	483	9.66	93.78	6.22	4 - 10	

Total Weight of Sample: 5000 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Requirement as per MORTH table 500.17	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	487	9.74	9.74	90.26	90 - 100	
9.5	551	11.02	20.76	79.24	70 - 88	
4.75	683	13.66	34.42	65.58	53 - 71	
2.36	536	10.72	45.14	54.86	42 - 58	
1.18	552	11.04	56.18	43.82	34 - 48	
0.600	551	11.02	67.20	32.80	26 - 38	
0.300	685	13.70	80.90	19.10	18 - 28	
0.150	202	4.04	84.94	15.06	12 - 20	
0.075	485	9.70	94.64	5.36	4 - 10	

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Date: 29.05.2023

TEST REPORT

Client	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	:	Sri. U Ramesh , Contractor, Bangalore.
Name of the work	:	Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
IS Code	:	IS 73:2013, IS 1203:1978(RA 2008), IS 1205:1978(RA 2009), IS 1208:1978(RA 2009), IS 1209:1978(RA 2009)
Source of location	:	Hot mix Plant, Bangalore, VG 30
Date of testing	:	29.05.2023

The results of the tests conducted on the bitumen sample using for Bituminous Concrete

Sl. No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 °C, 1/10 mm	55	Min 45
2	Softening point, °C	49	Min. 47
3	Ductility at 27°C, cm	> 105	Min. 40
4	Flash Point, °C	274	Min. 220

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date : 29.05.2023

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: Sri. U Ramesh , Contractor, Bangalore.
Name of Work	: Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Bituminous Concrete
Date of Testing	29.05.2023

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 500.16
1	Flakiness Index	12.9	13.2	Combined Flakiness & Elongation index Max 35%
2	Elongation Index	13.1	13.5	
	Combined Flakiness & Elongation index	26.00	26.70	

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date : 31.05.2023

Specific Gravity And Water Absorption Test

Client	: Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: Sri. U Ramesh , Contractor, Bangalore.
Name of the Work	: Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
BIS Code	IS 2386(Part 3):1963
Type of Mix	Bituminous Concrete
Date of Testing	29.05.2023 to 31.05.2023

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 3	
1	Weight of aggregate suspended in water with the basket	$W_1 g$	2022	2023	2025	
2	Weight of basket suspended in water	$W_2 g$	755	755	755	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s g$	1267	1268	1270	
4	Weight of saturated surface dry aggregate in air	$W_3 g$	2016	2018	2020	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_s) g$	749	750	750	
6	Weight of oven dried aggregate	$W_4 g$	2010	2011	2012	
7	Specific Gravity	$W_4 / (W_3 - W_s)$	2.684	2.681	2.683	2.683
8	Apparent Specific gravity	$W_4 / (W_4 - W_s)$	2.705	2.707	2.712	2.708
9	Water Absorption	$((W_3 - W_4) * 100) / W_4$	0.30%	0.35%	0.40%	0.35%

Comments:

→ Maximum allowable Aggregate Water absorption value for Bituminous Concrete is 2.0%(MORTH table 500.16)

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date: 05.06.2023

TEST REPORT ON STABILITY OF MIX

Client	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	:	Sri. U Ramesh , Contractor, Bangalore.
Name of the Work	:	Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Bituminous Concrete
Date of Testing	:	05.06.2023

The results of the tests conducted on the Bituminous Concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.12	10.19	9 Kn (min)
2	Marshal flow, mm	2.85	3.71	2 - 4
3	Percent air voids in Mineral Aggregate	13.21	14.39	13 - 15
4	Voids in Compacted Mix	3.96	4.26	3 - 6
5	Percent Voids filled with Bitumen	68.91	70.23	65 - 75
6	Density, g/cc	2.22	2.23	--

Note:

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Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date : 05.06.2023

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	: Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
AGENCY	: Sri. U Ramesh , Contractor, Bangalore.
NAME OF THE WORK	: Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
SAMPLE ID	Hot Mix Plant, Bangalore
DATE OF TESTING	05.06.2023

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472	472.5
3. Weight of Asphalt and Mineral matter Extracted, g	28	27.5
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	28	27.5
7. Bitumen content in %	5.60	5.50
8. Average	5.55	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	20.3	20.3	4.3	95.7	90 - 100
9.5	68.4	88.7	18.8	81.2	70 - 88
4.75	91.2	179.9	38.1	61.9	53 - 71
2.36	45.8	225.7	47.8	52.2	42 - 58
1.18	36.7	262.4	55.6	44.4	34 - 48
0.600	55.8	318.2	67.4	32.6	26 - 38
0.300	42.1	360.3	76.3	23.7	18 - 28
0.150	36.2	396.5	84.0	16.0	12 - 20
0.075	40.9	437.4	92.7	7.3	4 - 10

SIEVE SIZE mm	Test 2				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	18.4	18.4	3.9	96.1	90 - 100
9.5	69.1	87.5	18.5	81.5	70 - 88
4.75	94.5	182	38.5	61.5	53 - 71
2.36	48.1	230.1	48.7	51.3	42 - 58
1.18	50.2	280.3	59.3	40.7	34 - 48
0.600	55.9	336.2	71.2	28.8	26 - 38
0.300	49.7	385.9	81.7	18.3	18 - 28
0.150	36.5	422.4	89.4	10.6	12 - 20
0.075	33.1	455.5	96.4	3.6	4 - 10

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date :19.05.2023

GRADATION FOR WMM

Client : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency : Sri. U Ramesh , Contractor, Bangalore.
Name of Work : Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
IS Code: : IS 2386 (Part 1):1963(RA 2011)
Date of Testing :19.05.2023
Material Type : Wet Mix Macadam

Oven Dry.Wt, gram 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	175	175	1.8	98.3	95-100
22.4	2543	2718	27.2	72.8	60-80
11.2	2201	4919	49.2	50.8	40-60
4.75	1849	6768	67.7	32.3	25-40
2.36	1175	7943	79.4	20.6	15-30
0.600	585	8528	85.3	14.7	8-22
0.075	1175	9703	97.0	3.0	0-5

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date :19.05.2023

GRADATION FOR WMM

Client : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency : Sri. U Ramesh , Contractor, Bangalore.
Name of Work : Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
IS Code: : IS 2386 (Part 1):1963(RA 2011)
Date of Testing :19.05.2023
Material Type : Wet Mix Macadam

Oven Dry. Wt, gram 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	162	162	1.6	98.4	95-100
22.4	2519	2681	26.8	73.2	60-80
11.2	2205	4886	48.9	51.1	40-60
4.75	1860	6746	67.5	32.5	25-40
2.36	1193	7939	79.4	20.6	15-30
0.600	602	8541	85.4	14.6	8-22
0.075	1201	9742	97.4	2.6	0-5

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date : 19.05.2023

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: Sri. U Ramesh , Contractor, Bangalore.
Name of Work	: Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	19.05.2023

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	12.50	13.10	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	12.90	13.50	
	Combined Flakiness & Elongation index	25.40	26.60	

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Job No.: CACE/BBMP/UR/W.No.07/2022-23

Date: 29.05.2023

Aggregate Impact Value

Client	: Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: Sri. U Ramesh , Contractor, Bangalore.
Name of the Work	: Improvements to roads and drains in 1st Main Road 1st Cross Ravishanakara Residency, Sanjeeviningara in Ward No-07 Byatarayanpura.
BIS Code	IS 2386(Part 4):1963
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	29.05.2023

Sl No.	Details	Test No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	388	
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	85	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	300	302	
4	Aggregate Impact value = percent fines	22.08	22.16	22.12
	$100 * (W_2/W_1)$ percent			

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Concrete is 24%(MORTH table no.500.16)

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